

REMARKS

Claims 42-52 are pending in the application. Claims 42-52 stand rejected.

Claims 42, 46, 48, and 51 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ozaki (U.S. Patent No. 5,502,749, hereinafter referenced as “Ozaki”), in view of Kesner *et al.* (U.S. Patent No. 6,055,362, hereinafter referenced as “Kesner”).

Claims 43, 44 and 50 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ozaki, in view of Kesner, as applied to Claim 42, and further in view of Nakano *et al.* (U.S. Patent No. 5,559,789), hereinafter referenced as “Nakano.”

Claim 45 was rejected under 35 U.S.C. §103(a) as being unpatentable over Ozaki, in view of Kesner and Nakano, as applied to Claim 44, and further in view of Ojanpera *et al.* (U.S. Patent No. 5,703,873), hereinafter referenced as “Ojanpera.”

Claims 47, 49 and 52 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ozaki, in view of Kesner, as applied to Claim 42, and further in view of Hill (U.S. Patent No. 3,795,772), hereinafter referenced as “Hill.”

Claim 42 recites:

A method for managing a signal, comprising:
searching for a pilot tone by scanning a frequency range in predetermined frequency steps;
recovering a pilot tone sub-symbol;
calculating a parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol; and
adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone.

Item 4 of the present Office Action refers to column 1, lines 10-25 of Ozaki and states that Ozaki searches for a pilot tone by scanning a frequency range in predetermined frequency steps. Applicants respectfully disagree with this view. Ozaki, as explained in column 1, lines 10-25, merely notes that conventional digital cellular systems scan channels to detect a channel in which electrical field strength is most intense and find a broadcast control channel based on the channel identified to have the highest intensity of electrical field strength.

Thus, Ozaki does not disclose scanning a frequency range in predetermined frequency steps to search for a pilot tone. Ozaki merely introduces a two stage phase correcting method

that detects a first phase shift information in a first phase shift information unit and a second phase shift information in a second phase shift information unit. Ozaki then corrects the phase shift by comparing the output signals of the first and second phase shifts units (see column 2, line 65 to column 3, line 10 and column 9, lines 36-41).

Thus, Ozaki does not teach or disclose “searching for a pilot tone by scanning a frequency range in predetermined frequency steps,” as required by Applicants’ Claim 42. Kesner is being combined with Ozaki because Ozaki does not disclose “adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone,” as recited in Applicants’ Claim 42. However, Kesner merely describes a method for providing improved clock generation and distribution in a fully redundant computer system. Kesner does not disclose or teach “searching for a pilot tone by scanning a frequency range in predetermined frequency steps,” as required by Applicants’ Claim 42. Therefore, it is Applicants’ position that Claim 42 is allowable over Ozaki in view of Kesner. Accordingly, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of this claim be withdrawn.

Independent Claim 48 includes similar elements (“a search unit to search for a pilot tone by scanning a frequency range in predetermined frequency steps”) as independent Claim 42. Accordingly, Applicants respectfully request that the rejection of Claim 48 under 35 U.S.C. § 103(a) be withdrawn for the reasons presented above.

Since Claims 46 and 51 depend from independent Claims 42 and 48, Applicants respectfully request that these dependent claims be allowed for at least the same reasons as the base claim from which they depend.

Nakano is being combined with Kesner and Ozaki because neither one of these references disclose identifying and/or recovering pilot tone sub-symbols, as required by Applicants’ claims 43, 44, and 50. However, Nakano merely introduces a pilot generating circuit for generating a pilot signal that has a constant transmission power level. Nakano does not disclose or teach “searching for a pilot tone by scanning a frequency range in predetermined frequency steps,” as required by Applicants’ Claims 42 and 48. Since claims 43, 44, and 50 depend from base Claims 42 or 48, it is Applicants’ position that these claims are allowable over Ozaki in view of Kesner and further in view of Nakano. Accordingly, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of these claim be withdrawn.

Ojanpera is being combined with Kesner, Ozaki, and Nakano because these references do not teach or disclose scanning a plurality of bins to locate a bin containing the pilot tone sub-symbol, as required by Applicants' claim 45. However, Ojanpera merely introduces a method for synchronizing subscriber equipment. Ojanpera does not disclose or teach "searching for a pilot tone by scanning a frequency range in predetermined frequency steps," as required by Applicants' Claims 42 and 48. Since claim 45 depends from base Claims 42 or 48, it is Applicants' position that this claim is allowable over Ozaki in view of Kesner and Nakano and further in view of Ojanpera. Accordingly, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of this claim be withdrawn.

Hill is being combined with Kesner and Ozaki because neither one of these references disclose using a clock signal frequency for phase locked loop processing, as required by Applicants' claims 47, 49, and 52. However, Hill merely introduces a synchronization system with multiple control loops that are used to optimize rate of frequency acquisition and synchronization. Hill does not disclose or teach "searching for a pilot tone by scanning a frequency range in predetermined frequency steps," as required by Applicants' Claims 42 and 48. Since claims 47, 49, and 52 depend from base Claims 42 or 48, it is Applicants' position that these claims are allowable over Ozaki in view of Kesner and further in view of Hill. Accordingly, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of these claim be withdrawn.

CONCLUSION

In view of the above amendments and remarks, it is believed that all currently pending claims, claims 42-52, are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By Mark B. Solomon
Mark B. Solomon
Registration No. 44,348
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133

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